METHODS AND SYSTEMS FOR PROVIDING FINANCIAL SERVICES OVER A NETWORK

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The present application claims priority from U.S. Provisional Patent Application No. 60/126,791 filed on March 30, 1999. The contents of that application, in its entirety, is hereby incorporated by reference.

10   Field of the Invention

The present invention is generally related to providing services over a network, and in particular, to providing financial services over a network.

Background of the Invention

15   Conventionally, financial institutions, such as banks, credit unions, thrifts, brokerage houses, and mutual fund companies, who have established a presence on the Internet have done so using dedicated, custom developed Web sites. These financial institutions need to expend a great deal of both financial and time resources in developing their Web site. Often such expenditures are beyond the reach of smaller

20 financial institutions, who are thereby deprived of the ability to establish such a site, and cannot offer customer services associated with such a site, such as on-line banking. Without these on-line services, financial institutions are less attractive to customers, making it harder to acquire and retain customers.

In addition, both large and small financial institutions are deprived from

25 maximizing revenues from their Web sites. Customers seldom visit such sites, and so revenues related to site "hits" and ad impressions are relatively minimal. Indeed, for banks which do have Web sites, typically far less than 10% of bank customers use the Web site. When those few customers do visit the banks Web site, they typically only visit two to four times a month and spend only one or two minutes at the Web site to

30 view their account balance or to initiate bill payments. Banks have traditionally found it prohibitively expensive to expand their Web sites to include features, functionality, and content that would increase the use of their Web sites.

Further, particularly in the case of smaller financial institutions, their customer databases are too small to make their sites attractive to advertisers who want to deliver large numbers of targeted advertising intended for financial institution customers having selected demographic and financial characteristics.

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Summary of the Invention

The present invention is related to methods and systems that efficiently and flexibly provide financial and shopping services over a network, such as the Internet.

One embodiment of the present invention provides a centrally managed
10 networked system of financial institutions, including banks, savings and loans, thrifts, mortgage and lending institutions, investment advisors, insurance companies and vendors, and the like, that allows the financial institutions to participate in a global network under the auspices of a financial network service provider. The financial institutions have Web sites that support a base or common set of consumer and business
15 electronic features including, but not limited to: the use of a virtual purchase card used to purchase goods over the network, the ability to exchange specific consumer and business financial and demographic information, the ability to deliver financially oriented services like stock quotes, brokerage services, account transfers, wire transfers, business news, and the like.

20 The financial institutions may act as virtual Internet Service Providers (ISPs) for their customers at a reduced cost or for free. Further, the customers are provided with financial institution branded Web site portals providing valuable, real time information related to the customers' financial accounts, including bank balances, credit line availability, and the like. Thus, customers are drawn to visit and view the financial
25 institution portal on a frequent basis for significant durations. Such customers are very attractive to advertisers, allowing financial institutions to receive significant fees for the placement of such adds on the financial institution Web site.

The financial network service provider may use and/or provide common templates and tools for creating and maintaining the financial institution sites, thereby
30 greatly reducing the cost of developing on-line banking software for each financial institution. The sites may include a portal providing a wide range of services to the

respective customers of the corresponding financial institution. Each financial institution may use a common or default portal design, thereby further decreasing start-up costs typically associated with developing such a portal, and greatly speeding the deployment of such a portal. However, though several financial institutions may use the same portal design, each portal may be uniquely branded with the corresponding financial institution's trademark, logo, or other identifier. Further, the financial institution may modify their portals to develop a more unique look and feel.

In addition, in one embodiment the databases of several financial institutions may be aggregated to provide a larger, more diverse database that is much more attractive to advertisers and merchants. This aggregation of databases is greatly facilitated among financial institutions using the services of the same financial network service provider. The financial network service provider aggregates and organizes the multiple financial institution database into one database or as multiple databases that act as a virtual single database, without disclosing the database of one financial institution to another financial institution. The aggregated database can then be used to provide targeted advertisements and other information to the appropriate consumers.

A module or data structure in the form of a "virtual" card associated with a consumer may advantageously be used to perform or enable financial transactions, such as purchases, rentals, and the like, over the network. In one embodiment, the virtual card is associated with one or more funding financial instruments, such as bank accounts and credit lines. The virtual card may be used at multiple commerce sites. In one embodiment, the virtual card may also be used to manage one or more bank accounts and/or credit lines.

Brief Description of the Drawings

Figure 1 illustrates an electronic financial system which may be used with one embodiment of the present invention;

Figure 2 illustrates one embodiment of a portal architecture;

Figure 3 illustrates one embodiment of a purchase and maintenance form;

Figure 4 illustrates one embodiment of an example of a financial institution portal;

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Figure 5 illustrates one embodiment of a finance management selection form;

Figure 6 illustrates an exemplary Web page providing a consumer's shopping cart information;

Figure 7 illustrates an exemplary financial institution Web site shopping page;

Figure 8 illustrates an exemplary of aggregating financial institution information and distributing advertising fees;

Figure 9 illustrates an exemplary method of making purchases at multiple merchant sites; and

Figure 10 illustrates an exemplary method of shopping at a merchant site with links on the financial institution's Web site.

Detailed Description of Preferred Embodiments of the Present Invention

The present invention is related to an electronic network enabling financial and shopping services to be efficiently and flexibly provided. For example, one embodiment of the present invention advantageously enables an electronic network of banks and/or other financial institutions, such a credit unions, savings and loan institutions, brokerage houses, and the like, to be efficiently created, providing consumers comprehensive portal, e-commerce, and other financial-based services.

The financial/merchant network effectively ties together financial institutions, consumers, merchants and advertisers. A portion of the electronic financial system infrastructure used to implement the electronic financial network may be supplied and/or managed by a service provider, such as a financial network service provider. Advantageously, several financial institutions sites may be managed and/or hosted by the financial network service provider using common templates and tools for creating and maintaining the financial institution sites. One example of such a service provider is the Financial Service Provider Network™ (FSP Network™) of FSP Network, Inc. This technique greatly reduces the cost of developing on-line banking software for each financial institution.

The financial network service provider may act as a "virtual" or an actual internet service provider (ISP), by correspondingly acquiring ISP services on behalf the financial institutions or by directly providing ISP services. The financial institutions may in turn act as virtual ISP providers for their customers. Further, each financial

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institution may have its own "virtual" portal, which may be actuality hosted and/or maintained by the financial network service provider, which also arranges for content feeds to the portals. The financial institution portals can share some or all of the content feeds, the use of which may be provided by the financial network service provider. The financial network service provider thus advantageously reuses content and interfaces to content providers for the virtual portals, while still providing each financial institution with a unique look-and-feel and/or branding on the financial institution's home or portal page. In addition, the same software may be used to provide functions, such as search engines and e-mail, for multiple financial institution Web sites and portals.

As is commonly known, a portal in the context of the Internet is a Web site or similar service that offers a broad array of resources and services, such as on-line shopping, search engines, news, stock quotes, weather, e-mail, electronic forums, and so on. A portal is generally intended as the first or entry page into a Web site having multiple pages. A Web site is a networked site that implements the typical World Wide Web standards, such as HTML (Hypertext Markup Language) and HTTP (Hypertext Transfer Protocol) for coding and transmitting hypertextual documents. The site may be hosted on a single computer system, or on numerous linked computer systems at different geographic locations. While the following description relates to an embodiment utilizing the Internet and related protocols, other networks, such as data networked cellular or standard phones, and other protocols may be used as well. In the figures, words and phrases are underlined to indicate a hyperlink to a document or Web page related to the underlined word or phrase.

In the present embodiment, the financial institution portal further allows customers of the financial institution to access and manage their accounts from the financial institution's portal. Each financial institutions' portal may also contain links to merchant sites. In one embodiment, the merchant links may be restricted to those merchants which are clients of the corresponding financial institution. In addition, the financial institution may provide different levels of links and service to merchants. For example, a merchant that is a customer of the financial institution may be provided a free listing in the yellow pages directory of the institution's portal. Another level may be provided for a fee or to merchants who have a certain amount of deposits or loans

with the financial institution. For example, merchants that have more than a $10,000 average balance in one or more accounts may be provided with a single deep Web page, in the form of a virtual billboard. A still higher level of service, including fully functional e-commerce Web sites having multiple pages to display and sell products and

5   services, may be provided to merchants for a higher fee or for larger account balances.

In addition, as discussed below, the merchants priority position in a search result performed using the search engine, such as that available from Google, associated with the financial institution portal may be increased. The Google search engine analyzes Web page content, factoring in fonts, subdivisions, the positions of terms on the page,

10   and the content of neighboring web pages. The analyzed data enables the search engine to return results that are more relevant to user queries. In another embodiment, merchant links may be provided both to merchants that are the financial institution's clients and to those that are not. However, certain advantages may be provided to those merchants that are clients of the financial institution.

15   For example, merchant links may be provided as a free service for client merchants, or at reduced rates as compared to non-client merchants. Further, links to client merchants may be emphasized, by bolding, underlining, or using other techniques, as compared to non-client merchants. For example, such emphasis may be provided by ordering query results provided by a search engine in response to a user's

20   search request.

Typically, a search engine works by using a program, such as a Web spider, that automatically fetches Web pages. Because most Web pages contain links to other pages, a spider can start almost anywhere. When the spider locates a link to another page, the spider fetches that page. An indexer program reads the Web pages and creates

25   an index based on the words and links contained in each document, as well as related pages. A variety of algorithms may be used to create its indices such that relevant ranked results are returned for each user query. In one embodiment of the present invention, the search engine may be selectively restricted to searching for information contained within a specific Web site, such within a yellow pages directory associated

30   with a particular financial institution Web site. Further, in one embodiment, each financial institution has indices that will, in response to user queries related to products

and services, return information on relevant merchants that are customers of the financial institution.

By way of example, if a consumer visiting the financial institution's portal performs a search for a specific type of merchant using an electronic yellow pages or other search technique, the search results may be ranked so that relevant client merchant sites are listed before merchants that are clients of other financial institutions or other clients of the financial network service provider that are part of the financial network, which are listed before non-client merchants. For example, if a user searches for florists, the search results will list florists associated with the financial institution first, then will list florists associated with other financial institutions participating in the financial network, and then will list other florists. The client merchants may be further ranked amongst themselves so that the largest and/or oldest client merchants are listed first. This advantageously makes it more desirable for merchants to be associated with a financial institution having such a portal.

One unique aspect of the search and ranking technique, is that each financial institution may have its own directory or indices of client merchants. This allows each financial institution to sell, rent or license placement rankings on search results provided by the financial institution's Web site search function. Thus, though each financial institution may use the same search engine, the search ranking may be different for searches performed via different financial institution Web sites. This advantageously allow merchants to selectively purchase or rent ranking or placement locations on a financial institution-by-financial institution basis, rather than having to purchase or rent a ranking location on a search engine for all search inquires, regardless of the location or affiliation of the search requester. Thus, for example, if a merchant wants to target a certain region of the country, the merchant can rent search result ranking for searches performed on financial institution Web sites in that region, as opposed to a much more expensive ranking for all searches, regardless of the searches location.

To make the use of the financial institution's portal more attractive to consumers, and hence the placement of links on the portal more attractive to merchants, incentives may be provided to consumers to designate the corresponding financial institution's portal the consumer's home portal. The home portal is the Web page

presented when a user first connects to the Internet via a browser or the like, and to which the user's browser returns to when the user activates the "home" button or link on the user browser. Making the financial institution's portal the consumer's home portal is particularly advantageous for developing consumer loyalty and revenues, as studies have indicated that users of the Internet spend 5 times as much time at sites associated with their home portal than at other sites.

Incentives offered to consumers may include one or more of the following benefits. The consumer may be offered free banking services, such as free checking, free ATM usage, no minimum balance requirements, free credit reports, reduced loan fees, reduced, interest rates, and/or free electronic bill payment. Other types of banking services, such as e-mailed statements and images of a consumer's processed checks, may be offered as well. Further, the consumer may be offered desirable non-banking services, such as free Internet service, free e-mail, and the like.

In one embodiment, when a consumer activates a merchant link on the financial institution's site and makes a purchase at that site, a fee is paid by the merchant to the financial institution and/or the financial network service provider. This is in contrast to conventional systems, where the fee is typically only provided to the portal owner. The fee may be, for example, in the form of a fixed amount for each purchase, and/or a percentage of the purchase price. The fee may decrease as a percentage of the purchase prices as the price of the purchased item increases.

The financial network service provider may provide its services for free or at a reduced cost to a financial institution in exchange for these merchant fees. However, the financial network service provider may also charge the financial institution a fee for each consumer that has an on-line account with the financial institution. The fee may be a one-time set-up charge and/or a recurring periodic fee, such as a maintenance fee, for each consumer. Revenues received by the financial network service provider may be used to offset, reduce, or refund fees paid by the financial institution.

In addition, the financial network service provider may obtain revenues by reserving space on the financial institution's site and "renting" the space to advertisers and the like in exchange for payment. The financial network service provider may

reduce or eliminate fees charged to the financial institution in exchange for the reserved space.

Different fees, such as impression fees, may be charged for untargeted and targeted ads. In one embodiment, the more narrowly defined the targeted audience, the higher the fee. A fixed fee may be charged for a guaranteed number of impressions, that is, the number of times the ad is viewed or presented. The number of impressions are tracked in a log maintained by the site server, advertising space may be sold on a cost per thousand impression basis. The advertiser may alternatively be charged based on the number user activations or click-throughs (the process of a user clicking on a Web page advertisement and being linked to the advertiser's Web site), or for displaying the ad for certain time periods. Additional fees may be charged, for example, if the number of link activations exceeds a predetermined amount.

Various types of advertising may be provided on the financial institution's Web site pages. For example, the advertisements may be in the form of banner ads that periodically change. The banner ads may be unrelated to the subject matter of the Web page on which it is displayed. Typically, the ads of different advertisers rotate frequently, on the order of minutes, hours or days. Activating or clicking on a banner ad causes the consumer to be presented with the advertiser's Web site.

In addition, ads, including links to the advertiser, may be placed to indicate sponsorship of a particular Web page. These types of ads are generally not placed in the typical banner position. Furthermore, these types of sponsorship ads are generally presented on the corresponding Web page for long periods of time, such as months or years, further strengthening the impression that the advertiser is strongly associated with the sponsored page. Typically, there is a relationship between the information presented on the page and the sponsor's products or services. Thus, for example, a page providing listings of residential rental units may be sponsored by a moving company.

In addition, advertisements may be downloaded to a consumer's computer while visiting the financial institution's Web site for later offline display. For example, the downloaded ads may be later displayed while the consumer is in the process of connecting to the Internet or disconnecting from the Internet The ads may be displayed in a separate browser window, and may be textual or media rich, containing streaming

audiovisual presentations, graphics, and applets. Since the ads are displayed in a separate window during periods when the consumer is merely waiting for a connection to be established or disconnected, the consumer's Internet browsing experience is unaffected. Once an Internet connection is established or disconnected, the ad window may optionally automatically close, or may be closed in response to a user's command.

Furthermore, the present invention allows ads to be narrowly targeted to selected consumers, while maintaining the privacy and anonymity of those consumers. This is in contrast to conventional approaches, wherein banks and other financial institutions have obtained revenues by selling identifying information about their customers to third party advertisers, marketers, and the like. However, such conventional approaches infringe upon the privacy of customers, thereby greatly increasing customer dissatisfaction. In addition, such sharing of customer information may be outlawed by state or federal legislation.

One embodiment of the present invention avoids such intrusions on customer privacy, while still allowing financial institutions to realize revenue from use of their customer databases using a novel approach. Using the present invention, a financial institution may offer advertisers the ability to target financial institution customers who meet selected financial and demographic criteria, without disclosing the identity of the customers.

Thus, for example, the financial institution may offer the advertisers the ability to present ads or offers on the financial institution's portal or Web site to customers who meet the desired criteria, such as to those living in a selected geographic area, having an income within or above a selected range, owning a home, having a mortgage or car loan within a selected balance, having certain financial instruments, such as credit cards, credit lines, having certain types of accounts with certain balances, such as checking accounts, IRA accounts, money market accounts, and so on. In addition, the ads or offers may be targeted based on the one or more of the foregoing factors and on which site or type of site the customer is visiting or has recently visited. This information is available by accessing corresponding data stored in cookies on the customer's computer, or by examining URLs visited by the customer.

As is well know in the art, a cookie includes information provided to a Web browser by a Web server system, which may include one or more discrete servers. Typically, the browser stores the information in a text file, termed a "cookie." The information is then sent back to the Web server when the browser requests a page from that Web server system. Cookies enable the identification of users and/or computers and allow customized Web pages to be prepared for that user. The cookie may contain information provided by the user, such as the items placed by the user in a shopping cart, or in the present invention, also information provided by financial institutions and/or the financial network service provider. The information may include the user name, address, e-mail address, account balances, account identifiers, credit limits, user interests, time spent by the user viewing certain Web pages, and the like. The cookie information may be encrypted using standard encryption techniques, such as RSA encryption, a commonly used public-key encryption technology developed by RSA Data Security, Inc. The next time the user visits one or more Web sites corresponding to the cookie, the browser will send the cookie to the Web server system. The server system can use this information to present the user with selected ads and content, as well as to complete the purchase of items in the held shopping cart.

Once an advertiser selects its desired target audience, the financial institution, directly or via its agent, such as the financial network service provider, routes the ads o r offers of products and services to the appropriate financial institution customers, onto the appropriate Web pages. Because the financial institution or its agent is responsible for routing the advertisements to its customers, the customer identity or identification related information does not have to be provided to the advertisers or marketers.

Several examples of ads which may be targeted based on customer financial information available to a bank or the like will now be discussed. In one example, a realtor in a certain geographical area handling expensive homes may selectively target advertisements for homes valued above a selected amount, such as $400,000 and more, to customers who have at least a combined selected amount, such as $40,000, deposited in accounts associated with the financial institution, and who have an existing mortgage. In another example, the financial institution can display ads or offer a car loan to customers who have an existing car loan whose term is to end with 3 months and who

are visiting or have recently visited a Web site directed to automobiles, such as a car dealer Web site. An insurance company can target home insurance ads or offers to customers who have recently inquired about a home loan or mortgage from the bank or who have actually recently taken a home loan or from the bank. Similarly, an insurance company can selectively target ads or offers to financial institution customers who have recently taken out a car loan from the financial institution.

Further, in one embodiment, the databases of one or more financial institutions may be aggregated or combined to provide a larger, more diverse resource that is much more attractive to advertisers and merchants. This aggregation of databases is greatly facilitated among financial institutions using the services of the same financial network service provider. The financial institutions provide their customer database to the financial network service provider. The financial network service provider in turn aggregates and organizes the multiple financial institution databases into one database with multiple corresponding tables and sub-tables, or as multiple databases that act as a virtual single database.

By having the financial network service provider aggregate the databases, each financial institution can keep their database and customer information confidential from the other financial institutions, while still enjoying the benefits of being part of a larger database. The aggregated database generally includes a wider variety of consumers having different demographic and financial characteristics than an isolated financial institution customer database. Thus, it is more likely that such an aggregated database will have consumers desired by advertisers who wish to provide targeted advertising. In addition, while many individual financial institutions are regional, the aggregated database may include information from regional financial institutions located throughout the United States. Thus, using the aggregated database, advertisers can be offered targeted customers nationwide, rather than just regionally. The financial network service provider can offer access to the customers who make up this large aggregated database.

In addition, because the financial network service provider, acting as an agent of multiple financial institutions, represents a much larger purchaser of services that a single financial institution, the financial network service provider can obtain much

better rates for a variety of Internet related services. For example, the financial network service provider can negotiate with and obtain reduced wholesale rates from Internet service providers on behalf of the member financial institutions. Thus, the cost of subsidizing the Internet access and ISP service for financial institution customers is greatly reduced. Similarly the cost of obtaining other types of services, such as backbone network capacity, dial-up lines, servers, network management services, data center services, backup and recovery services, Web site design, Web site hosting, informational content, customer technical support, e-mail services, and other network infrastructure services is significantly reduced because of the volume of such purchases or because expenses, such as capital expenses, are shared.

The financial institutions may select to use a standard, default portal and Web site pages created and/or managed by the financial network service provider. This default portal provides an easy to use customer interface to portal services, including on-line shopping, search engines, news, stock quotes, weather, e-mail, electronic forums, and so on. Though several institutions may all use the same default portal design, each institution's portal will be uniquely branded with the corresponding institutions logo, trademarks, and the like. This is accomplished by using the same content and formatting information for all or part of two or more financial institution's Web sites, while rendering different logos and like at a page location designated for such logos. Thus, through the use of a default portal style, development costs and time are further reduced. Furthermore, because two or more financial institutions' Web sites share content and formatting, changing or modifying shared formatting or content correspondingly changes the related Web sites of the two or more financial institutions. Because the maintenance associated with Web sites can be thus shared, the cost of maintaining the Web site of a particular finical institution Web site is greatly diminished. The more Web sites that share formatting and content, the greater the reduction in costs in design and maintenance per Web site.

If instead, a financial institution wants a more customized portal, the financial institution can either modify the standard or default portal design, or can create an entirely new portal design. In one embodiment, a suite of financial institution Web templates exists whereby financial institutions may select the look and feel of their Web

site using the pre-existing templates. Various techniques well known to one of ordinary skill in the art may be used to modify or create a portal design, and the technique used is not critical to the present invention. Further examples of systems and methods that can be used are further described in a concurrently filed application having the title "SYSTEMS AND METHODS OF CUSTOMIZING AND GENERATING WEB PAGES", which is incorporated herein by reference in its entirety.

When a customer of a member financial institution wants to obtain free internet access via the financial institution, in one embodiment, the customer loads corresponding software on the customer's computer. The software includes an installation program, a browser branded with the financial institution's logos and the like, an on-line registration module, network software that enables a subscriber to connect to the Internet, related user documentation and instruction manuals, and optional application programs. The software may be downloaded using the Internet from either the financial institution's Web site or from the financial network service provider's Web site. In addition, the software may be distributed on CD-ROM, optionally labeled with the financial institution's brand markings, by or on behalf of the financial institution.

When the customer initially loads and runs the software, the customer will be presented with a registration form. The customer will be asked to enter the customer's name, an account number with the financial institution, and e-mail address, a selected password or PIN (personal identification number). Once the customer enters the information, the information is stored in a database, and an on-line account is opened with the financial institution. In addition, the customer may be asked to provide additional demographic information to further allow the customer's on-line experience to be enhanced. The requested demographic information may include information on the customer's family size, ages of family members, number of cars owned, number of televisions, audio systems, phones, amount of travel per year, types of financial accounts at other financial institutions, and so on.

One embodiment of the electronic financial system will now be described with reference to Figures 1-10. Throughout the following description, reference will be made to various implementation-specific details, including, for example, coding conventions,

document and protocol standards, and forms used for managing accounts. These details are provided in order to fully set forth a preferred embodiment of the invention, and not to limit the scope of the invention. For example, though one or more of the Web sites discussed below may be illustrated as being hosted on a single computer system, the Web sites may optionally include content that spans multiple Internet domains, and/or may be implemented using physical servers that are geographically remote from one another.

One or more customers may access the financial institutions' Web sites. As illustrated in Figure 1, in one embodiment of the electronic financial system, 100, a customers use browsers executing on a computer-type device or system, such as terminals 106, 116. A terminal may be a personal computer, network-aware television, phone, personal digital assistant, and the like, to interface with one or more financial institution sites, and merchant or vendor sites over a network 104, such as the Internet. The customer may also use the browser to access the financial network service provider site.

The merchant site may be hosted on a second computer system 112, such as a server or the like. In one embodiment, a merchant is certified before being allowed to participate directly in the financial network. For example, a merchant may be required to meet certain financial conditions, customer service provisions, offer certain warranties to consumers, and pay a fee, to be certified.

In one embodiment, at least one financial service software program, including a plurality of instructions, may be hosted on the same computer system as the merchant site, or may be hosted on a separate computer system 102, which include one or more servers. The computer system 102 in this embodiment is operated or managed by a financial network service provider.

By way of example, the computer system 102 may include a portal server which receives local, static, and/or live content, as well as merchant pages, stores the content as well as portal page formatting information in a relational database. In addition, the computer system may include a Web page server that actually serves pages based on content and formatting information received from the portal server. In particular, the software executing on the financial network service provider computer system 102 includes a rendering engine that dynamically renders Web pages on the fly in response

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to customer requests. As will be discussed later in greater detail, the computer system 102 includes or is coupled to customer databases, including the customers of multiple financial institutions, as well as customized content description, storing custom look and feel information for the financial institutions, customer customizations, and/or merchant information. The computer is coupled to various content providers so that content can be both dynamically and statically provided to customers. In another embodiment, the financial service software helps manage transactions between the customer and the merchant.

The computer system 102 in this embodiment is operated or managed by a financial network service provider.

One embodiment of the present invention provides for a network of financial institutions including banks, savings and loans, thrifts, mortgage and lending institutions, investment advisors, insurance companies and vendors, and the like, to participate in a global network under the same moniker or other representation. In this embodiment, many or all of the financial institutions support a base set of consumer and business electronic features including, but not limited to: the use of a purely electronic means to purchase goods over a network, the ability to exchange specific consumer and business financial and demographic information, the ability to deliver financially oriented services like stock quotes, brokerage services, account transfers, wire transfers, business news, and the like. Each financial institution may have its own corresponding computer system 108, 114 used to maintain its accounts and databases. The financial institution computer system may include mainframe computers and servers.

A virtual private network 110 may be used across which transactions and information particular to financial institution-to-financial institution business transactions and financial institution-to-merchant or vendor transaction may be made. The virtual private network 110 may utilize the Internet or may use a private, point-to-point network. Proprietary and/or industry standard security and software interfaces and protocols, such as the Secure Electronic Transactions (SET) standard, the Open Financial Exchange (OFX) standard, XML (Extensible Markup Language), HTTP, Affinity-Connect and the like, may be provided over the private network 110 or over the

Internet 104, upon which participating financial institution's may conduct their business in a secure manner.

Figure 2 illustrates one embodiment of a software-implemented portal system architecture used to serve pages financial institution Web site pages to customers and consumers. The corresponding software executes in the financial network service provider computer system 102. In the illustrated example, customer databases from Financial Institution A and Financial Institution B are stored in non-volatile memory 210, such as hard disk, CD-ROM, or DVD storage systems. As discussed below, these databases are used to manage financial transactions and purchases, and to optionally collect customer and other information to target ads more effectively to selected recipients. Customer on-line account information, including user identifiers, passwords, virtual finance card information, and e-mail addresses, are also stored. In addition, rendering/formatting information specific to each financial institution's Web site, as well as any customer specific formatting and content information, are stored in a database as well. In addition, the computer system may contain merchant databases containing merchant account information. In one embodiment, the databases are implemented using Oracle 8i, a publicly available internet-oriented database product from Oracle®.

The appropriate content may be periodically retrieved from a variety private and/or public sources 202, such as the Associated Press, Standard and Poor, weather sources, and the like. These sources are typically not updated in real time, and so only have to be read by the system periodically. For example, the weather may only be updated every 30 minutes. The content sources may be filtered using one or more filters 204, 206, 208, such as an XML filter, an ANPA filter, or other types of filters, to appropriately translate or parse the incoming content into formats, using XML or the like appropriate for use the portal system. The retrieved content may be cached in the non-volatile memory so that it may be repeatedly served without having to retrieve the content from the content providers each time.

A content provider layer is used to render pages on the fly based on the customer and formatting information stored in the appropriate databases and the periodically updated content. The rendered Web pages are then transmitted to the end user browser

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using standard HTTP protocols. In addition, real time queries, such as for search results using a search engine, real-time stock quotes, and the like, are retrieved and rendered as part of the portal or other Web page. In one embodiment, dynamic Web page customization commands may optionally be communicated between the user and the financial network service provider. However, this optional feature is not a necessary part of the present invention. In one embodiment, to maintain a more consistent look and feel to the Web pages, the pages may not be customizable by a user.

A module or data structure associated with a customer is used in conducting financial transactions, such as in making purchases. In one embodiment, the module is associated with one or more financial instruments, such as bank accounts, checking accounts, credit lines, money market accounts, investment accounts, and the like. The module acts as electronic or virtual finance or funding card, also termed an electronic commerce card. By way of example, the module or data structure may be used to enable the purchase or license of goods and/or services from merchants, vendors, or other providers. The card may be used at multiple seller or merchant sites. In addition, the module may also be used to manage one or more bank accounts, investment accounts, and/or credit lines.

To better enhance security, in one embodiment, the electronic card may include a digital signature, or other types of identifiers, associated with the customer and/or account information. The digital signature and/or the account information may be encrypted using a private key or the like. The account information may contain information related to checking accounts, saving accounts, credit lines, and/or other financial instruments. In another embodiment the electronic card may also contain or be associated with demographic data pertaining to the card holder and his/her family or business relationships. In this embodiment, the electronic card may be used as the basis for determining customer relationship management (CRM) data. An icon representing the electronic module or card may be displayed on a customer terminal. As discussed below, in one embodiment, the customer may cause at least some of the information associated with the module to be displayed in response to a user command.

A customer may also be associated with a shopping-related data structure, such as, by way of example, a virtual or electronic shopping cart. that acts as an online store's

catalog and ordering process. Typically, a shopping cart is the interface between a merchant's Web site and its underlying infrastructure. As will be discussed in greater detail below, the shopping cart may be used by customers to select merchandise, review their selections, modify, delete, or add to the selections, and to purchase the items in the

5   shopping cart.

Thus, for example, the shopping-related data structure may be used to track or hold information identifying products the customer has selected for possible purchase, lease or licensing. In contrast to many conventional virtual shopping carts, which are typically used at one site, one embodiment of the shopping cart of the present invention

10   may be used with multiple merchants at multiple sites. Thus, by way of example, a customer may add to the shopping cart a first item from a first merchant site and a second item from a second merchant site. In this embodiment, the electronic card provides purchase aggregation capabilities over the Internet or other private network. Figure 6 illustrates a visual representation of the shopping cart information provided to

15   a customer using a Web page.

The customer may checkout or purchase both the first and the second item from the first and second merchant in the same financial transaction. In one embodiment, the customer provides authorization to purchase the first item and the second item with the same command or commands, such as by activating a submit button displayed on a

20   customer terminal. The customer may use the virtual card in the purchase process. In one embodiment, the icon associated with the virtual card is displayed on the customer's terminal when browsing both the first and the second merchant sites. The purchase procedure may be executed, at least in part, by financial service software executing on a computer server. In one embodiment, the server may be associated with a financial

25   institution, an intermediary, or the like.

In one embodiment, during the purchase process, the customer may be offered one or more funding options. For example, in one embodiment, the customer may select between different financial instruments to fund a purchase. The financial instruments may be associated with the virtual card used in the purchase process. In one

30   embodiment, two or more financial instruments may selectively be used to fund the purchase. For example, if the purchase price exceeds the customers credit limit on his

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or her credit card, the customer may elect to pay a portion of the purchase price using the credit card up to its limit, and pay the remainder using a cash account.

The funding selection may be provided, at least in part, by financial service software with access to a database of financial instruments associated with the customer. Thus, in one embodiment, a customer may select between either a bank account, such as a checking account or a savings account, or a credit line, such as a credit card, to fund the purchase. Thus, the card may act as a credit card, a debit card, and/or a checking card. The use of such a card may be particularly advantageous to consumers who do not have or cannot get a credit card. Using the virtual funding card, a customer can have the payment funded from a cash account, such as a savings account, or via an electronic check from a checking account. Conventionally, such customers do not have a convenient way of electronically purchasing items over the Internet, and instead have to order C.O.D. or mail a physical check in. Alternatively, one conventional method of making "cash" purchases electronically over the Internet is to buy a specific amount of "digital cash" from a source, receive a corresponding certificate, including a code number, providing the code number to a merchant, who then "deposits" the code with the source, which then pays the merchant. Such methods have provider cumbersome and have not found wide public use. Further, such a non-intuitive approach is unlikely to be used by the less computer and Internet literate consumers.

In one embodiment, a user may select a default payment option. The default option allows the user to specify the default financial instrument which will be used for future purchases. Thus, for example, a Purchase and Maintenance form illustrated in Figure 3 offers the user the option of using a default financial instrument associated with the electronic card. For security purposes, in order to access this form the user may be required to enter a password and a user name. Using a drop-down menu, the user may select between a variety of financial instruments associated with the card as the default. For example, the user may be able to select between an electronic check, a credit line, a cash account, a credit card, or the like, associated with the electronic card. The choice offered via the drop down menu may vary from user to user, so that the choices correspond to the accounts and funding instrument that a particular user has. Furthermore, additional funding choices may be automatically offered if the user opens

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additional financial accounts. Similarly, the funding choices offered may be automatically reduced if the user closes one or more accounts. In one embodiment, the user is offered the option of selected user accounts and funding mechanisms associated with a particular financial institution. or with several financial institutions associated with the financial network. The next time the user makes a purchase, the selected instrument will automatically be used to pay for the purchase.

In addition, the form illustrated in Figure 3 may be used to choose the "Select Bancard Account on Purchase" option. When this option is selected, then at the time a purchase is being made, the user will automatically be presented with a list of the financial instruments associated with the electronic card, such as those discussed above. The user may then manually select which financial instrument should be used to fund the purchase. The Purchase and Maintenance form illustrated in Figure 3 may also be used to select the "Personal Credit Card" option. When this option is selected, a user's personal credit card will be the default funding instrument in future purchases. In one embodiment, the user can also use the drop down menu to select the personal credit card as the default funding option, though the use of the drop down menu may be more time consuming then selecting the option on the Purchase and Maintenance form. The virtual card may also include shipping information accessible by merchants so that the user does not have to reenter such information each time the user makes a purchase at a Web site.

In one embodiment, the customer may selectively delay the purchase of one or more items in a virtual shopping cart. The delay may be for a period of time selected by the customer, or until the customer authorizes the purchase to be completed, by activating an appropriate order submit link. Information associated with the shopping cart may be stored during the delay period. For example, shopping cart data may be stored on the customer computer, such as on a local hard drive in a cookie, during the delay period. In another embodiment, the shopping cart data may be stored on a remote system, such as a server associated with the financial institution, during the delay period.

The customer may optionally modify the cart contents before the purchase is completed. For example, by selecting one or more items and activating the "Remove"

button on the shopping cart Web page illustrated in Figure 6, the customer may selectively delete one or more items associated with one or more merchants. Similarly, the customer may modify the quantity of the items ordered. In one embodiment, the customer may separately select different financial instruments for the purchase of corresponding different items, or for purchases from corresponding different merchants. For example, if a customer or user activates or clicks on an account entry for item in the shopping cart illustrated in Figure 6, a financial instruments selection form will be displayed, from which the customer can select from a list of financial instruments to fund the item purchase.

Further, the customer may selectively retract a completed purchase order by providing such instructions by phone, e-mail, or a customer service Web page form. In still another embodiment, the customer may selectively retract a purchase order without incurring additional expense if the retraction is made within a selected amount of time, such as within 24 hours, or before a selected event, such as before the purchased item is shipped or delivered. In one embodiment, a fee is charged for the retraction of an order after the selected period or event.

In yet another embodiment, the customer's purchase order is provided to the financial institution or intermediary, rather than directly with the merchant. The customer's order is then placed with the merchant by the financial institution or its intermediary, rather than directly by the customer. In still another embodiment, if an electronic shopping cart contains items from two or more merchants, the financial institution, or its intermediary, places corresponding purchase orders with the corresponding merchants. Thus, in contrast to conventional systems, where the customer or purchaser places an order directly with each corresponding merchant, in one embodiment of the present invention, the actual order is placed with the merchant by the financial institution or other third party. In addition, the purchase order or orders may include payment for the purchase. In one embodiment, the payment is deposited by the financial institution, or its intermediary, directly into an account, such as a bank account, associated with the merchant. In still another embodiment, the financial service software issues one or more transaction files, such as batch transaction files, to a clearing house, as part of the payment process.

Appropriate insurance may be provided for transactions between customers and merchants to reduce the risks associated with on-line purchases, including the risk that a customer may default on a payment or provide a stolen credit card number, and the risk the merchant will accept payment and then not provide the purchased item. Thus, for example, payment transaction insurance may be used to guarantee that the merchant will be paid for a purchased item. If the customer defaults, then the insurance may compensate the merchant accordingly. Similarly, if a merchant fails to deliver a purchased item, then the transaction delivery insurance may be used to refund the purchase price, and optionally shipping and tax, to the customer.

Provision of such payment transaction insurance may be limited to customers of the financial institution whose account information meets at least one criteria. For example, insurance may be provided when financial instrument associated with a customer has a property, such as an account balance or an available credit line, that meets or exceeds a first amount. The amount may be a predetermined amount, such as $1,000, or may be dynamically selected based on the price of the item being purchased. For example, insurance may be provided when the customer's account balance exceeds the cost of the item being purchased. Furthermore, insurance may be denied if the customer is not a confirmed customer of at least a first bank or if the account information fails to meet the one or more criteria.

Transaction delivery insurance may also be denied if the merchant does not meet specified criteria. To further reduce the risk associated with transactions, in one embodiment, both a merchant and a customer are certified before any transaction insurance is provided. Insurance may be optionally provided as a free service by the financial institution or financial network service provider, or selectively purchased by either the merchant or the customer for an additional fee for a given transaction.

Merchant certification may be provided as follows. In one embodiment, merchants are enrolled in a program, also called a "certified merchant program," which ensures or guarantees, via investigative techniques, that the merchant is reliable and fiscally sound. For example, a real-time Dunn and Bradstreet® (D&B) report may be requested as part of the investigative process. Similarly, a credit check, via a credit check company such as TRW®, may be performed. In addition, one or more

participating financial institutions may provide financial information on a given merchant from the financial institutions' internal databases. Furthermore, a database containing a history of consumer comments or complaints may be checked. Additionally, the Better Business Bureau may be consulted for complaints regarding a merchant or vendor. In one embodiment, a database containing a record of prior financial investigations may be checked to determine the reliability of the merchant or vendor. For example, if the database contains a D&B report that has already been recently performed, the investigative process may rely on the recent report and not request another report, thereby saving time and money. When deciding whether to certify the merchant, the gathered information may be examined to determine if the merchant has good credit, a low number of consumer complaints, assets or revenues of greater than a certain amount. The debts of the merchant may be examined as well. In addition, the location of the merchant may be taken into account in deciding whether to certify a merchant. For example, insurance may be restricted to merchants who have a presence in the United States.

Electronic transactions over the Internet may be facilitated through the optional use of the novel "electronic" virtual funding card described above. In one embodiment, a customer may also use the virtual card to gain access to one or more financial accounts. The customer may use this access to get account balances, monitor credit line status, transfer funds between accounts, pay bills, withdraw funds, or open new accounts. Thus, for example, in one embodiment, a customer may use the virtual card to authorize regular automatic bill payments to specific vendors, such as utility payments such as gas, lights, and electricity and the like. The customer may optionally use the virtual card access information on account balances and/or payment histories with one or more vendors.

The account information may be updated in real-time to reflect deposits, withdrawals, credits, debits, accrued interest and the like. For example, the account information may be updated during the course of financial transactions, such as during the purchase of one or more items. Thus, for example, if a customer funds a purchase using a credit card, the customer may be informed in substantially real time that the available credit has decreased by an amount equal to the purchase price. Similarly, if

the customer funds a purchase using a cash account or checking account, once the purchase is made, the customer may be informed of the new, lower balance. In one embodiment, the financial may be e-mailed the balance information in response to a transaction being executed. Thus, the customer is provided with an almost immediate record of the effect the transaction has on an account.

In one embodiment, even before an actual purchase is made, the customer may be provided with information on how the actual purchase of items in the shopping cart will effect the financial instrument designated to fund the possible purchase. Thus, for example, if the customer has designated a checking account having a balance of $700 to fund the purchase of an item, such as a television cost $600, the customer will be informed that should the purchase be completed, the balance will be reduced to $100. Thus, in contrast to conventional systems, the customer is provided with real-time information on how contemplated purchases would effect account balances should the purchase be consummated.

The customer and/or the financial institution may set up alerts when an account balance or available credit falls to or below a selected amount. For example, a customer may request, via mail, phone, or using a Web page form, that an alert be provided whenever the customer's checking account falls below $200. The customer may request that the alert be provided via e-mail, phone, regular mail, and/or displayed on the customer terminal when accessing the Internet. The alert may display or otherwise provide the current account balance and indicate what amount the customer had previously selected to trigger the alert. A audible alarm may also be provided using the audio system of the terminal used to access the Internet. The financial institution, either directly or via the financial network service provider, may then monitor the customer balances. If after a financial event, such as a purchase or a check clears, the monitored account fails within the alert parameters, the alert is sent to the customer. This alert helps customers avoid expensive and unwelcome surprises, such as account overdrafts or having credit cards refused.

Similarly, the customer may request an alert be provided when items pending purchase in one or more shopping carts would cause one or more designated funding accounts to fall to or below a selected amount if the purchase(s) were completed. Thus,

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the customer is alerted even before a purchase is made that the purchase may deplete one or more accounts below desirable levels.

The novel close integration of financial institutions, merchants and consumers allows other unique services to be provided to consumers. For example, if during a purchase process, it is detected that a customer's selected funding instrument, such as a credit line, is nearing its credit limit, the financial institution or its agent, can offer to increase the credit to a selected amount via a Web page served to the customer's browser. The Web page further requests the customer to activate an "I Accept" link if the customer agrees to accept the higher credit limit, or to activate an "I Decline" link to refuse the higher credit limit. The bank may also or instead offer the customer an additional credit source, such as an addition credit card with its own associated credit limit, or a loan based on equity the customer may have in property, such as a home. Further, if the customer is funding a purchase via a cash or debit account, and the account balance falls below a selected amount, such as $100, the customer may be presented with an offer for overdraft protection for a fee. Thus, the close integration of financial institutions in the electronic commerce marketplace allows the financial institutions to offer better service to their customers while also providing the institutions more revenue opportunities.

As previously discussed, one embodiment of the present invention ensures that a customer will use a network portal or site associated with a financial institution that is affiliated with the virtual card. In one example, a customer browser is directed to a first portal, such as a portal associated with a financial institution, even if the customer designates a different portal as a home page on the customer browser. Thus, one embodiment of the present invention ensures that the customer is redirected to the financial institution's site or portal. The redirection is performed by an applet, such as a Java script program. Such a redirection may be performed in accordance with a prior agreement entered into by the customer. The customer may have agreed to such redirection in exchange for free or reduced rate Internet service, free or reduced rate banking services, discounts on purchased items, and/or in exchange for other incentives. Alternatively, the browser may have the browser's home page URL designation hard

coded with the financial institution's portal URL, with no option available to the user to change the home page URL designation.

In another embodiment, upon connecting to the Internet, the end-user's or customer's Web browser may be "held" at the financial institution's portal for a predetermined amount of time, for example, for 10 seconds, during which the customer cannot browse to another site. The hold time may be optionally varied. The customer may have agreed to being held for the selected period of time at the portal in exchange for incentives, as previously discussed with respect to the redirection embodiment.

As previously discussed, in one embodiment, the portal is actually hosted by a third party, such as an financial intermediary affiliated with the financial institution. As illustrated in Figure 4, the portal may be visually configured, by means of the financial institution's name 402, trademark, icon, or the like, so that it appears to a user or customer as if the portal is directly hosted or managed by the financial institution. Thus the portal may be termed a "virtual portal" of the financial institution. Different financial institutions may have the same portal design, however, the name, trademark, icon, or the like with reflect a given financial institution's identity. The portal may include a variety of "tabs" 404-414 used to select navigable pages presenting information regarding specific areas of interest, such as a home page tab 406, financial institution and account information (FirstBank) tab 402, entertainment tab 408, finance tab 410, shopping tab 412, and news tab 414. The user may also access account information by activating the "Finances" link 416. In addition, the user may customize his or her portal page or other pages by activating the "Customize" link 418. The user may access e-mail by activating the "e-mail" link 420. The same format and content could be used for a second bank, except, for example, the logo "FirstBank" may be replaced with the logo "SecondBank."

By way of example, if the user activates the financial institution and account information tab 402 or link 416, the user may be presented with corresponding account information or options, as illustrated in Figure 5. The user can then activate one or more corresponding account links, such as links to credit cards, banking and loans, online banking, stocks and bonds, mutual funds, and/or retirement accounts. The user may then activate or click on the virtual funding card "eBancard" symbol, and the user

will then be presented with the appropriate Web page allowing the user to view and/or manage the selected account or item. Alternatively, the user can activate a home page link and be transported back to the financial institution's portal or home page.

Figure 7 illustrates one embodiment of a shopping page, including information and navigable icons associated with one or more certified merchants. The user may go to a merchant site by clicking or otherwise activating the link associated with the icon or information associated with the merchant. The shopping page includes both a banner ad 702, and sponsor ads and links 704-708. The ads may be targeted at users living in geographical proximity to an advertising merchant, or based on other demographic and financial factors.

In one embodiment, information related to a customer's navigation over a network, such as the Internet, and/or purchasing activities is monitored, gathered and stored in a cookie on the customer's computer or by the information gatherer. The information may include a score based upon the sites visited, and/or may include site identification information. The score information may include information provided one or more financial institutions affiliated with the financial network, including demographic and financial information. The information may then be provided to one or more recipients, such as advertisers, merchants, financial institutions, or other entities. As previously described, the information may be provided via the financial network provider, with the identity of the customer kept confidential. The score may be used in dynamically deciding what advertising or offers should be presented to the customer. The score may be calculated using any one of a number of algorithms.

In exchange for such customer information, the information recipients may provide the customer with additional information or a service. For example, an advertiser may use the navigation information to selectively provide targeted advertisements to the customer. In yet another embodiment, the customer may disable at least a portion of the information monitoring and gathering feature.

In one embodiment, financial information related to one or more customers visiting or shopping at a merchant site is provided to selected recipients. For example, the financial information, such as account balance, credit cart limits, available credit card or credit line limits, may be provided to the merchant whose site was visited. This

information may be provided via a customer cookie or the information may be dynamically retrieved from financial institutions or the from the aggregated database managed by the financial network service provider. In another embodiment, certain customer identification information and/or financial information are filtered before the information is provided. For example, the identification and/or financial information may be filtered in accordance with government regulation or privacy agreements with the customer. In yet another embodiment, a customer can selectively inhibit the delivery of customer information to a merchant or other recipient.

To further enhance the security of transactions performed over the network, in one embodiment, software supplied by the financial network service provider that resides on the customer computer analyzes and identifies the customer's underlying computer hardware configurations, developing a fingerprint of that hardware that provides for a match, such as a "best match," between the customization capability of the virtual portal, the constraints of the available hardware, and end user choice. For example, the processor type, graphics engine, display, sound system, memory, and the like may be determined, and one or more of these elements may be used to form the computer fingerprint. Thus, the portal configuration options may be related to the customer terminal or computer capabilities.

The computer fingerprint also allows for enhanced levels of security over the Internet. In one embodiment, the computer fingerprint is associated with a particular customer or consumer. For example, if a person identifying herself or himself as a particular customer via a customer identification code or the like, enters or attempts to use the financial system, including the virtual card, one embodiment of the present invention checks the computer fingerprint being used and compares it with the fingerprint identified or associated with the customer identifier. If the computer fingerprint does not match the associated customer identifier, additional security precautions may take place. In one embodiment, the person is prohibited from accessing or using the financial system. In another embodiment, the person may be required to provide an additional identifier, such as an additional password. In still another embodiment, the person is granted access to the financial system, but a notice,

in the form of an e-mail or the like, is sent to the customer's e-mail address, informing the customer that his identifier was used on another system.

In one embodiment, the financial network service provider customer software causes an financial institution-branded icon to displayed "perpetually" on the end user's desktop. Thus, for example, the financial institution-branded icon will appear on the user or customer's desktop, such as the Windows desktop, each time the user starts his or her computer or alternatively, when the user access the Internet. In one embodiment, access to the Internet via the financial "virtual" network is achieved by activating or clicking on the financial institution-branded icon. In another embodiment, access may be accomplished using other techniques, such as by entering an appropriate financial network service provider URL in the browser address field. Upon execution of the dialup process by clicking the financial institution-branded icon, an ad, such as, by way of example, one or more offline or interstitial advertisements, will pop up for the duration of the dialup and connection routine. Thus, the user or customer is advantageously presented with ads during the time period where the user cannot yet browse the network. In another embodiment, if the user accesses the network using an immediate, or non-dialup, access via xDSL, cable access, T1 line, or the like, the offline ads may be presented for viewing for a preset time period. In still another embodiment, the ad or ads will periodically refresh while the end user is online. In one embodiment, the ad update function is not overtly discernable to the end user.

In one embodiment, when the traffic level between the end user's computer and the Internet is low, which may be determined by customer software provided by the financial network service provider, advertising and product updates are downloaded for delayed or later display at the customer's computer.

In one embodiment, the user's home Web page on the sponsoring financial institution contains regions or areas which may be controlled by the end user, the financial institution, or the financial network service provider. For example, the user may be allowed to customize a selected area on the home page. However, the user may be restricted from customizing other portions of a Web page, such as the portion containing the logo or name of the sponsoring financial institution, the banner ads, and/or other ads. In another embodiment, the financial institution is allowed to display

advertising particularly related to the financial institution's business, like offers for checking account services, savings account services, and the like.

The financial network service provider portal may provide such services as an integrated chat/email/messaging platform based on software installed on the customer machine when the customer installs the basic financial network service provider portal access software. The portal may also include access to one or more search engines, electronic yellow pages, directories, and the like.

As previously described, the financial institution may use the electronic financial system to participate in a co-marketing system directed toward merchants who are bank customers. In this embodiment, the financial network service provider provides a turnkey Web site for the financial institution's merchants in which a merchant may accept payment for items or services via the virtual funding card. In one embodiment, a suite of merchant Web templates exists whereby merchants may select the look and feel of their Web site using the pre-existing templates.

Figure 8 illustrates one method 800 of aggregating financial institution information and distributing advertising fees. At state 802, the financial network service provider accesses or is provided with the customer databases of two or more financial institutions. The databases may be retrieved over a private network or the Internet, or may be provided by the financial institutions on a computer readable medium, such as on an optical disk or on a magnetic tape. If the format of the financial institution databases or not compatible with the database used by the financial network service provider, the financial database first be translated before the aggregation step is performed. At state 804, the financial institutions' customer databases are aggregated into corresponding tables and sub-tables in one database. Thus, customer information for all customers of the participating financial institutions may be analyzed, and demographic and financial information extracted or derived. At state 806, based on the information obtained from the aggregated databases, targeted advertising from merchants or other advertisers may be selectively presented on the portal page associated with a targeted customer's financial institution or on other Web pages, without revealing the identities of the customers to the advertisers. At state 808 fees associated with the advertising are distributed to both the financial network service

provider and to the financial institution on whose portal or Web pages the ad was presented. To encourage financial institutions to contribute their databases to the aggregated database, in one embodiment, a fee may also be paid to all participating financial institutions whose database are included in the aggregated database, even if a given ad was not presented on their portal or Web site. The term "fee" is used herein in the broad sense, and may include cash payments, account credits, a reduction in service charges, free or reduced cost advertising space, and the like.

Figure 9 illustrates one method 900 of making purchases at multiple merchant sites using the virtual funding card discussed above. At state 902, a user selects the default funding for the virtual funding card. The user may, by way of example, perform such selection using the form illustrated in Figure 3 as discussed above. The user then visits a first merchant site at state 904. The user may have accessed the first merchant site via a link on a financial institution Web site, by directly entering a URL into the user browser, via an electronic yellow pages, or using other techniques. At state 906, the user then proceeds to purchase an item from the first merchant using the default funding associated with the virtual funding card. For example, the default funding may be a bank account or credit card. In one embodiment, the funding of purchases made using the virtual card may be guaranteed by the financial institution that "issued" the virtual card, so that the merchant is ensured of payment.

In one embodiment, if the default funding instrument is a credit card, rather than providing the merchant with the credit card number, the merchant is merely supplied with a code corresponding to the financial institution associated with the credit card and an identification code associated with the virtual card which further indicates that the default funding instrument is being used to fund the purchase. The merchant then contacts the bank which charges the requisite funds against the user's credit card account, and transfers the funds to the merchant. Further, because the financial institution's guarantee is typically trusted by merchants, merchants can safely ship the purchased item even before payment is transferred by the bank to the merchant. Thus, the user's credit card number is not widely distributed and the user's name may be kept confidential. Purchases are thereby easier and more secure than with conventional techniques.

The user then visits a second merchant site at state 908. As with the first merchant site, the user may have accessed the second merchant site via a link on a financial institution Web site, by directly entering a URL into the user browser, via an electronic yellow pages, using other techniques, or by activating a link on the first merchant site. At state 910, the user then proceeds to purchase an item from the second merchant using the virtual funding card. However, rather than using the default funding, the user selects an alternative method, such as a credit line, of funding the purchase.

At state 912 payment for the first purchase is transferred from the default funding source to the first merchant. At state 914, payment for the second purchase is transferred from the alternate funding source to the second merchant. Of course, the payment to the first merchant can optionally have been made before the user made the purchase at the second merchant site.

In addition, portions or a percentage of the price for each purchased item may be charged as a fee to the merchants. The fee may be provided to the financial institution if its site was used directly or indirectly to link to the merchants, the financial network service provider managing and/or hosting the financial institution and/or the merchant Web sites, and/or the financial institution which provided the funding for the purchases, which may be the same as the financial institution to whose site was used to link to the merchants.

Figure 10 illustrates one embodiment of a method 1000 of shopping by accessing a merchant site using links on the financial institution's Web site. At state 1002 a customer or user connects to the Internet using a terminal or the like, via an associated browser. As previously discussed, while the customer is in the process of connecting, ads may be presented on the terminal display. Once the connection is established, at state 1004, the customer is presented with the financial institution's portal, including links to one or more affiliated merchants. At state 1006, the customer's activation of a merchant link is received. Next, at state 1008, the customer is presented with the corresponding merchant Web site. At state 1010 an order for an item is received directly by the merchant, by the financial institution, or by an agent of the financial institutions hosting and/or managing the financial institution's site, and/or

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the merchant's site. In this example, the order includes a directive, in the form of the virtual funding card or otherwise, from the customer that payment should be provided from an account or credit line associated with the financial institution. A determination is made at state 1012 as to whether the customer qualifies for transaction payment insurance. As previously discussed, various criteria may be used to make such a determination.   If the customer does meet the criteria, then transaction payment insurance is provided, ensuring that the merchant will be paid even if the customer defaults. As previously discussed, the insurance may be provided as a free service to the merchant, or the merchant may pay a fee, which may be a fixed amount or a percentage of the amount being insured.

A determination is made at state 1016 as to whether the merchant qualifies for transaction delivery insurance. As previously discussed, various criteria may be used to made such a determination.   If the merchant does meet the criteria, then transaction delivery insurance is provided by the financial institution or a partnered insurance company at state 1018, ensuring that the customer will be reimbursed if the merchant fails to deliver the ordered item. The insurance may be provided as a free service to the customer, or the customer may pay a fee, which may be a fixed amount or a percentage of the amount being insured.

At state 1020, portions of the payment is withheld as a fee for the financial institution and/or its intermediary, such as the financial network service provider. At state 1022, the fee is transferred to the intermediary, and at state 1024 payment is provided to the merchant. The merchant may then deliver the item to the customer at state 1026. Of course, the merchant may also deliver the item before payment is actually received by the merchant.

The aforementioned features are advantageously integrated in a coherent marketing, sales, and product system, the net effect being the creation of a network of banks and/or financial institutions each of which provides comprehensive portal, e-commerce, and other electronic based services using the financial network service provider infrastructure. Thus, customers are provided with enhanced services, while the cost to financial institutions providing those services are substantially reduced.

While certain preferred embodiments of the invention have been described, these embodiments have been presented by way of example only, and are not intended to limit the scope of the present invention.